

1. (currently amended) A method for monitoring and ~~analysing~~ analyzing a process, ~~in which method~~ the method comprising the steps of:

measuring a large number of variables ~~are measured~~ from the process,

with the aid of these variables, forming a fingerprint according to a good process situation, ~~relative with respect~~ to runnability, ~~is defined~~ and then stored storing the fingerprint in a memory,

comparing the stored fingerprints ~~are compared~~ with fingerprints obtained in an online momentary ~~normal~~ process situation,

on the basis of the comparison, deriving the difference, ~~displayed graphically to the user,~~ between the ~~recorded~~ stored good process situation and the momentary process situation ~~is defined,~~ and graphically displaying the difference to the user,

characterized in that the ~~definition~~ fingerprint according to a good process situation is made separately in several sub-processes, and at least one specific index in the selected sub-process is defined according to a poor process situation ~~relative with respect~~ to runnability, ~~according to a poor process situation,~~ in order to detect a machine-specific critical situation.

2. (currently amended) A method, according to Claim 1, in a paper machine, characterized in that said specific index relates to one of the following:

- ~~the~~ mass-mixing in ~~the~~ a short circulation sub-process,
- ~~the~~ a condition of ~~the~~ felts in ~~the~~ a press section, and
- ~~the~~ an electrochemical state of ~~the~~ a wet-end of the process.

3. (currently amended) A method according to Claim 1, characterized in that the fingerprint according to a poor process situation is ~~substantially~~ narrower in its area than the fingerprints according to a good process situation.

4. (previously presented) A method according to Claim 1, characterized in that the fingerprint according to a poor process situation is calculated from at the most six variables.

5. (currently amended) A method, according to Claim 1, using a neural network, characterized in that the fingerprint according to a good process situation is calculated in ~~the~~ a teaching stage from at least ten variables.

6. (previously presented) A method, according to Claim 1, using a neural network, characterized in that the system is used under remote control.